

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-32 (canceled).

Claim 33 (previously presented): An electrical current generating system comprising:
a fuel cell including an anode channel including an anode gas inlet and an anode gas outlet, a cathode channel including a cathode gas inlet and a cathode gas outlet, and an electrolyte in communication with the anode and cathode channel for facilitating exchange between the anode and cathode channel;

an oxygen gas delivery system coupled to the cathode gas inlet for delivering oxygen gas to the cathode channel; and

a hydrogen gas delivery system coupled to the anode gas inlet for delivering a gaseous stream enriched in hydrogen gas to the anode channel, including a first rotary pressure swing adsorption system for enriching hydrogen in a gaseous feed, where the first rotary pressure swing adsorption system includes a first gas feed gas inlet for receiving a first gas feed comprising hydrogen gas and a gas outlet coupled to the anode gas inlet.

Claim 34 (original): The electrical current generation system according to claim 33 where the hydrogen gas delivery system includes a gas inlet for receiving a second gas feed from the anode gas outlet and a gas outlet for delivering the gaseous stream enriched in hydrogen gas to the anode channel.

Claim 35 (original): The electrical current generation system according to claim 34 where the second gas feed is passed through the first rotary pressure swing adsorption system.

Claim 36 (original): The electrical current generation system according to claim 35 where the first rotary pressure swing adsorption system includes a second feed gas inlet for receiving the second gas feed.

Claims 37-38 (canceled).

Claim 39 (previously presented): The electrical current generating system according to claim 36 where the hydrogen gas delivery system comprises a reactor for producing the first gas feed from hydrocarbon fuel, and wherein the first rotary pressure swing adsorption system is coupled to the reactor for receiving the first and second gas feeds.

Claim 40 (previously presented): The electrical current generating system according to claim 33 wherein the hydrogen gas delivery system comprises a reactor for producing the first hydrogen gas feed from hydrocarbon fuel.

Claim 41 (canceled).

Claim 42 (previously presented): The electrical current generating system according to claim 39 where the first rotary pressure swing adsorption system hydrogen includes a first feed gas inlet for receiving the first gas feed, and a second feed gas inlet for receiving the second gas feed.

Claim 43 (original): The electrical current generating system according to claim 42 where the first gas feed is provided at a pressure level different from a pressure level of the second gas feed.

Claim 44 (previously presented): The electrical current generating system according to claim 39 where the reactor comprises a steam reformer, and a water gas shift reactor coupled to the steam reformer for producing the first gas feed.

Claim 45 (canceled).

Claim 46 (previously presented): The electrical current generating system according to claim 39 wherein the reactor comprises an autothermal reformer, and a water gas shift reactor coupled to the steam reformer for producing the first gas feed.

Claims 47-50 (canceled).

Claim 51 (original): The electrical generating system according to claim 33 further comprising a gas recirculation means coupled to the cathode gas outlet for recirculating a portion of cathode exhaust gas exhausted from the cathode channel to the cathode gas inlet.

Claim 52 (original): The electrical generating system according to claim 39 further comprising a gas recirculation means coupled to the cathode gas outlet for recirculating a portion of cathode exhaust gas exhausted from the cathode channel to the reactor for producing hydrogen from hydrocarbon fuel.

Claims 53-81 (canceled).

Claim 82 (previously presented): An electrical current generating system, comprising:
at least one fuel cell; and

a hydrogen gas delivery system coupled to the fuel cell for delivering hydrogen to the fuel cell, the hydrogen gas delivery system comprising a rotary pressure swing adsorption module, wherein the rotary pressure swing adsorption module includes an adsorbent that preferentially adsorbs at least one carbon oxide.

Claim 83 (previously presented): The system according to claim 82, wherein the carbon oxide is carbon monoxide or carbon dioxide.

Claim 84 (currently amended): The system according to claim ~~32~~ 33, wherein the first rotary pressure swing adsorption system includes an adsorbent that preferentially adsorbs at least one carbon oxide.

Claim 85 (previously presented): The system according to claim 84, wherein the carbon oxide is carbon monoxide or carbon dioxide.

Claims 86-91 (canceled).

Claim 92 (previously presented): An electrical current generating system, comprising:
at least one fuel cell defining an anode inlet and an anode outlet; and
a hydrogen gas separation device coupled to the fuel cell anode inlet for delivering enriched hydrogen to the fuel cell anode, the hydrogen gas separation device receiving a recycle gas from the fuel cell anode outlet and a hydrogen feed gas from a hydrogen gas generating system, wherein the hydrogen gas separation device preferentially separates at least one carbon oxide from the recycle gas and the hydrogen feed gas.

Claim 93 (previously presented): The system according to claim 92, wherein the carbon oxide is carbon monoxide or carbon dioxide.

Claims 94-100 (canceled).

Claim 101 (previously presented): An electrical current generating system, comprising:
at least one fuel cell defining an anode inlet, an anode outlet, and a cathode inlet;
an oxygen gas delivery system coupled to the cathode inlet for delivering oxygen gas to the fuel cell cathode; and
a hydrogen gas separation device coupled to the fuel cell anode inlet for delivering enriched hydrogen to the fuel cell anode, wherein the hydrogen gas separation device receives a recycle gas from the fuel cell anode outlet and a hydrogen feed gas from a hydrogen gas generating system, wherein the hydrogen gas separation device is capable of preferentially separating at least carbon monoxide from the recycle gas and the hydrogen feed gas.

Claims 102-103 (canceled).

Claim 104 (previously presented): A process for providing hydrogen gas to a fuel cell, comprising:

- generating a hydrogen-containing feed gas via reforming or partial oxidation;
- introducing the hydrogen-containing feed gas into a rotary pressure swing adsorption module that can produce a purified hydrogen-containing gas; and
- introducing the purified hydrogen-containing gas into a fuel cell;

wherein the hydrogen-containing feed gas includes at least one carbon oxide and the rotary pressure swing adsorption module removes a substantial amount of the carbon oxide.

Claim 105 (previously presented): The process according to claim 104, wherein the carbon oxide is selected from carbon monoxide and carbon dioxide.

Claims 106-112 (canceled).

Claim 113 (previously presented): A process for providing hydrogen gas to a fuel cell, comprising:

- adsorbing at least one contaminant from a first hydrogen-containing feed gas stream to produce a first purified hydrogen-containing gas stream;
- adsorbing at least one contaminant from a second hydrogen-containing feed gas stream to produce a second purified hydrogen-containing gas stream; and
- introducing the first purified hydrogen-containing gas stream and the second purified hydrogen-containing gas stream into the fuel cell.

Claim 114 (previously presented): A process for providing hydrogen gas and oxygen gas to a fuel cell, comprising:

- introducing an oxygen gas stream into a fuel cell cathode;
- adsorbing at least one contaminant from a first hydrogen feed gas stream to produce a first purified hydrogen gas stream;
- adsorbing at least one contaminant from a second hydrogen feed gas stream to produce a second purified hydrogen gas stream; and

introducing the first purified hydrogen gas stream and the second purified hydrogen gas stream into a fuel cell anode.

Claim 115 (previously presented): The process according to claim 114, further comprising reforming or partially oxidizing a hydrocarbon fuel to produce the first hydrogen feed gas stream.

Claim 116 (previously presented): The process according to claim 115, further comprising recycling an exhaust stream from the fuel cell anode to produce the second hydrogen feed gas stream.

Claims 117-131 (canceled).